

1/1

	1				50
rhimi	SIDGGIRAAT	SQEINELTY	TTLSANSYCR	TVIPGA...T	WDC..IHCD
rhidl	SDGGKVVAAT	TAQIQEFTKY	AGIAATAYCR	SVVPGN...K	WDC..VQCQK
SP400	-----EVS	QDLFNQFNLF	AQYSAAAYCG	KNNDAPAGTN	ITCTGNACPE
Pcl	-----DVS	TSELDQFEFW	VQYAAASYYE	ADYTAQVGDK	LSCSKGNCPE
FoLnp11	-----AVGVT	TTDFSNFKFY	IQHGAAAYC.	.NSEAAAGSK	ITCSNNGCPT
	51				100
rhimi	TE..DLKIIK	TWS.TLIYDT	NAMVARGDSE	KTIYIVFRGS	SSIRNWIADL
rhidl	WV.PDGKIIT	TFT.SLLSDT	NGYVLRSDKQ	KTIYLVFRGT	NSFRSAITDI
SP400	VEKADATFLY	SFEDSGVGDV	TGFLALDNTN	KLIVLSFRGS	RSIENWIGNL
Pcl	VEATGATVSY	DFSDSTITDT	AGYIAVDHTN	SAVVLAFRGS	YSVRNWVADA
FoLnp11	VQGNGATIVT	SFVG.SKTGI	GGYVATDSAR	KEIVVSFRGS	INIRNWLTLN
	101				150
rhimi	TFVPVSY.PP	VSGTKVHKGF	LDSYGEVQNE	LVATVLDQFK	QYPSYKVAVT
rhidl	VFNFSKY.KP	VKGAKVHAGF	LSSYEQVVND	YFPVVQEQLT	AHPTYKVIIVT
SP400	NFDLKEINDI	CSGCRGHDGF	TSSWRSVADT	LRQKVEDAVR	EHPDYRVVFT
Pcl	TFVHTNP.GL	CDGCLAELGF	WSSWKLVRDD	IIKELKEVVA	QNPNYELVVV
FoLnp11	DFGQEDC.SL	VSGCGVHSGF	QRAWNEISSQ	ATAAVASARK	ANPSFNVIST
	151				200
rhimi	GHSLLGGATAL	LCALDLYQRE	EGLSSSNLFL	YTQGPVPRVD	PAFANYVVST
rhidl	GHSLLGGAQAL	LAGMDLYQRE	PRLSPKNLSI	FTVGGPRVGN	PTFAYYVEST
SP400	GHSLLGGALAT	VAGADLRGN.	.GY...DIDV	FSYGAPRVGN	RAFAEFLTVQ
Pcl	GHSLLGAAVAT	LAATDLRGK.	.GYP...SAKL	YAYASPRVGN	AALAKYITAQ
FoLnp11	GHSLLGGAVAV	LAAANLRVG.	.GT...PVDI	YTYGSPRVGN	AQLSAFVSNQ
	201				250
rhimi	G.IPYRRTVN	ERDIVPHLPP	AAFGLFLHAGE	EYWITD.NSPETVQ
rhidl	G.IPFQRTVH	KRDIVPHVPP	QSFGLHPGV	ESWIKS.GT.SNVQ
SP400	TGGTLYRITH	TNDIVPRLPP	REFGYSHSSP	EYWIKS.GTL	V.PVTRNDIV
Pcl	G..NNFRFTH	TNDPVPKLPL	LSMGYVHVSP	EYWITS.PNN	A.TVSTSDIK
FoLnp11	A.GGEYRVTH	ADDPVPRLPP	LIFGYRHTTP	EFWLSSGGGD	KVDYTISDVK
	251				300
rhimi	VCTSDLETS	CSNSIVPFT.	.SVLDHLSYF	GINTGLCT~~	~~~~~
rhidl	ICTSEIETKD	CSNSIVPFT.	.SILDHLSYF	DINEGSC~	~~~~~
SP400	KIEGID.ATG	GNNQP.NIP.	.DIPAHLOWYF	.GLIGTCL~	~~~~~
Pcl	VIDGDV.SFD	GNTGTGLPLL	TDFAHIWYF	.VQVDAGKGP	GLPFRV~~~
FoLnp11	VCEGAA.NLG	CNGGT.LGL.	.DIAAHLHYF	.QATDACNAG	GFSWRRYRSA
	301				338
rhimi	-----	-----	-----	-----	...
rhidl	-----	-----	-----	-----	...
SP400	-----	-----	-----	-----	...
Pcl	-----	-----	-----	-----	...
FoLnp11	ESVDKTRATMT	DAELEKKLNS	YVQMDKEYVK	NNQARS..	

Fig. 1

Alignment of lipase sequences